

REMARKS

Claims 1-5, 7-18 and 20-29 are pending in this application. Claims 1-5, 7-18 and 20-29 are rejected. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

As an initial matter, if this Amendment does not place the application in condition for allowance, Applicants respectfully request a telephone interview between the Examiner and the undersigned. Applicants would also like to thank the Examiner for discussing the present application with the undersigned. As discussed, the Examiner indicated that he would discuss the allowability of this application with an examiner in a different patent class.

Claim 29 has been rejected under 35 U.S.C. 112, second paragraph for being indefinite. The Office Action states that a cache is an erasable, reprogrammable memory, while the language of the claim appears to mean that the claimed memories are different. Applicants submit that the claim language requires that there are two memories, which may be the same or different. Moreover, while a cache memory may be an erasable, reprogrammable memory, a cache memory may also be other types of memories. Applicants define the memories as a first memory and a second memory. Applicants submit that it is clear that the memories are not the same memory, but may be of the same type as discussed above. Accordingly, Applicants submit that the rejection of claim 29 under 35 U.S.C. 112, second paragraph should be withdrawn.

Claims 1-3, 5, 7-18 and 24-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McCartan et al. (U.S. Patent 6,270,460), hereafter McCartan in view of Wakabayashi et al. (U.S. Patent 5,487,386), hereafter Wakabayashi. Claims 4 and 20-23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McCartan in view of Wakabayashi, and further in view of Ramamurthy et al. (U.S. Patent 7,156,551), hereafter Ramamurthy. Applicants respectfully traverse these rejections for at least the reasons set forth below.

Applicants have amended independent claim 1 to recite a method for tracking use of an ultrasound probe including, among other elements “storing probe identification information and different types of tracking information within a memory in a connector of an ultrasound probe removably connectable to an ultrasound system, wherein the different types of tracking information include duration of use information and at least one of length of time between scans information and probe usage pattern information, the probe usage pattern information including at least a length of time for each use.” Applicants have also amended independent claim 24 to recite an ultrasound system including, among other elements “an ultrasound probe having a connector for removable connection to the ultrasound scanner, the connector having a memory for storing probe identification information and different types of tracking information, wherein the different types of tracking information include duration of use information and at least one of length of time between scans information, probe usage pattern information and mode of operation information, the probe usage pattern information including at least a length of time for each use.” Each of these claims require that the usage pattern information including at least *a length of time for each use*.

McCartan discloses an ultrasound system wherein the number of times the ultrasound probe has been used is monitored and updated (abstract). Using fuses within the probe, a number of times of use or a total time duration of probe usage based on blown fuses may be determined (see, e.g., col. 3 lines 58-67 and col. 4, lines 27-60).

Wakabayashi discloses a ultrasound system that measures cumulative operation time of an ultrasonic probe (abstract). The system includes probes with connectors that store the sum of operating time for a corresponding probe. In particular, a probe operation time monitoring unit updates (i.e., overwrites) the cumulative time of each memory within a connector to save a measured continuous operation time (see, e.g., Wakabayashi, col. 4, lines 38-46).

Thus, in each of the McCartan and Wakabayashi systems, a total time of usage is saved. However, there is no way to determine from blown fuses or a total time, a length of time for each use as claimed. Simply because the number of times of use and the total time of use for a probe

may be determined by the cited references, this cannot provide the length of time for *each use*. For example, dividing the total time of use by the number of uses would not give the length of time for each use. Accordingly, Applicants submit that claims 1 and 24 are allowable.

With respect to the rejection of claim 20, the Office asserts that “Ramamurthy teaches a method of checking faults in ultrasound equipment (title) using temperature” and further teaches “this as being used to upgrade ultrasound equipment.” (Office Action, page 7). Applicants initially note that the abstract is merely indicating that the fault checking may be performed on upgraded and new systems, not that the fault checking is used to upgrade the equipment. Ramamurthy measures probe temperature using a system that does not need new electronics or hardware. The claimed invention recited in claim 20 requires that the temperature information is based on thermistor measurements. Ramamurthy clearly teaches away from using thermistors. In particular, in the Background section, Ramamurthy states the following with respect to the use of thermistors:

The IEC standards require that an ultrasound transducer temperature not exceed a predetermined limit of 43 deg C. Some ultrasound probes include one or more thermistors added to the stack of the transducer. The thermistors provide a level of fault protection by measuring temperature of the ultrasound transducer and activating a series of protective measures when the temperature reaches a certain value. However, *adding thermistors to ultrasound transducer increases the cost of transducers; consequently, most transducers are not built with thermistors. It may be difficult, problematic or impossible to add thermistors to an already existing transducer* (col. 1, lines 13-28, emphasis added).

Ramamurthy solves this problem by measuring temperature without using thermistors. Thus, Applicants submit that Ramamurthy makes clear that the temperature measurement system

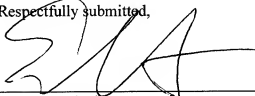
used therein is an alternative to using thermistors. Accordingly, Applicants submit that claim 20 is allowable.

Applicants further submit that dependent claims 2-5, 7-18, 21-23 and 25-29 recite further subject matter not anticipated or rendered obvious by the cited references. Moreover, dependent claims 2-5, 7-18, 21-23 and 25-29 are likewise patentable based at least on the dependency of these claims from the independent claims.

There may be additional reasons to the reasons described herein or herebefore that claims 1-5, 7-18 and 20-29 are each patentable over the cited references. Without waiver of such additional reasons, Applicants reserve the right to argue such additional reasons hereafter.

In view of the foregoing amendments and remarks, it is respectfully submitted that the cited references neither anticipate nor render obvious the claimed invention and the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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